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PN - JP10199455 A 19980731
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 OPD - 1997-01-10
 TI - IMAGE DISPLAY DEVICE
 IN - MITSUTAKE HIDEAKI; YAMAZAKI KOJI
 PA - CANON KK
 IC - H01J31/12 ; H01J29/04 ; H01J29/86

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TI - Image forming apparatus with electron beam source - includes **spacer** which is arranged between substrate and face plate, such that its centre is deviated from electron emitting element which is connected to **scanning** signal wiring

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PN - JP3466848B2 B2 20031117 DW200382 H01J31/12 022pp
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PA - (CANO) CANON KK

IC - H01J29/04 ;H01J29/86 ;H01J29/87 ;H01J31/12

AB - J10199455 The apparatus includes a substrate on which an electron emitting element is provided. **Voltage** is applied to the electron emitting element through a **scanning** signal wiring .
 (13). A face plate with an acceleration electrode is arranged opposing the substrate, to accelerate an electron beam.

- A **spacer** (20) is arranged between the substrate and the face plate, on the **scanning** signal wiring. The centre of the **spacer** is deviated from the electron emitting element which is connected to the **scanning** signal wiring.

- ADVANTAGE - Prevents reduction in brightness and obtains clear image display.

- (Dwg.1/22)

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 PA - CANON INC
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AB - PROBLEM TO BE SOLVED: To prevent the shutting off of emitted electrons caused by a **supporting** member and prevent a drop in brightness of a phosphor in the vicinity of the **supporting** member by arranging the **supporting** member between a substrate and a face plate, and shifting the center of the **supporting** member arranged in a wiring for **scanning** signal from the center of the wiring for **scanning** signal.

- SOLUTION: Electron beams 112-1, 112-2 are emitted from electron emitting elements 111-1, 111-2 formed on a substrate 11, and an image is formed on a phosphor 18. During operation of a wiring 13-1 for scanning signal for driving the electron emitting element 111-1, the other wiring acts as a wiring 13-2 for scanning signal, and to drive an electron emitting element 111-1, one wiring shifted to the right side of the wiring 13-2 for scanning signal acts as the wiring 13-1 for scanning signal. A spacer 20 is arranged in the position shifted from the center of a wiring 13-0 for scanning signal in the direction where electron beams 112-1 and 112-2 are inclined, and brought into contact with the wiring 13-0 for scanning signal, and thereby, the electron beams 112-1 do not collide against the spacer 20 and reach the phosphor 18.
- H01J31/12 ;H01J29/04 ;H01J29/86